Message

From: LEE, LILY [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP

(FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=D6085A744F9347E6836C54C0E85B97B2-LLEE06]

Sent: 1/11/2017 5:15:46 PM **To**: jaustin@arb.ca.gov

CC: Bacey, Juanita@DTSC [Juanita.Bacey@dtsc.ca.gov]

Subject: FW: Hunters Point statistical analysis

Attachments: Investigation of Anomalous Soil Samples at HPNS Exec Sum.pdf; Hunters Point Tetra Tech Mtg summary - statistician

needs.docx

Dear Jeff,

I hope you are well! I just left you a voicemail, and I'm following up with more background information, as promised. I am also cc'ing Nina Bacey, who is the state lead remedial project manager on this issue. I have made a request to our USEPA Region 9 science liaison to find a USEPA statistician to help us in this review (see below). I talked to her for a while this morning, and she appreciates the need. She will help us look for someone, but no promises. I don't know whether we will be successful in getting that expertise or not. So I wanted to also reach out to you for advice, since you are the ARB's statistician.

Thanks!

- Lily

From: LEE, LILY

Sent: Tuesday, January 10, 2017 11:22 AM

To: Cook, Anna-Marie <Cook.Anna-Marie@epa.gov> **Subject:** Hunters Point statistician support requested

Dear Anna Marie,

Thank you for talking with me about the possibility of getting statistician support.

As background, the Navy has hired Tetra Tech EC to for over a decade for radiological cleanup work at the Hunters Point Naval Shipyard. The Navy discovered that Tetra Tech has falsified some data. Attached is an executive summary of Tetra Tech EC's earlier investigation 2012-2014 to identify anomalies in K-40 concentrations, sample in 386 locations, and new remediation (when resampling showed actual levels above release criteria). The NRC's investigation is excerpted in the attached Word file. NRC concluded an enforcement action 9/2016 against Tetra Tech EC. It showed that a Tetra Tech EC supervisor ordered a staff person to deliberately under-represent the actual concentrations. Attached on the next page are excerpts from a 3/2016 news article in which a former Tetra Tech EC employee alleged other forms of falsification, e.g. disappearing a sample that was above the release criterion. The Navy is launching a broader investigation now. It has hired a team of 3rd party independent consultants who are collecting and evaluating 2.5 million data points of historical data from Tetra Tech EC. They are using statistical tests to look for other forms of falsification. Later they will collect field samples. The sampling plan will be at least partially informed by the statistical tests. More work will continue.

Right now I have technical support from 3 health physicists and a geologist. All of these have some statistics knowledge and have been giving feedback to the Navy about their statistical analysis.

We would appreciate a statistician to add to our team for reviewing this work, which will likely continue for at least 18 months.

Lily

From: LEE, LILY

Sent: Wednesday, January 4, 2017 6:35 PM

To: Cook, Anna-Marie < Cook, Anna-Marie@epa.gov>

Subject: Statistician support?

Dear Anna-Marie,

Congratulations again on your new position. I hope you are enjoying it.

I wanted to see if it is possible to get a statistician to review Navy proposals for reviewing radiological data at Hunters Point. Tetra Tech ECI has confirmed instances of falsifying samples in its radiological characterization work in the past in certain locations. The Navy is evaluating past data to look for evidence of other potential falsifying in other aspects of Tetra Tech work. Attached is a draft data evaluation approach proposed that I just received. Does ORD or anywhere else have expertise in statistics to help review this proposal? This is a very quickly moving process. We would also need help into the future.

Thanks!

- Lily